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What We Publish in CiSE

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What We Publish in *CiSE*

I'm ba-a-ack.

It has been a few issues since I penned—okay, typed—the Editor-in-Chief's message. Long ago, before becoming an academic/researcher for good, I learned during my days as a software developer the great importance of building a great team. To this end, I asked each of my associated editors to share their perspectives on computational science and the publication itself with you, our dear readers. I'm blessed with an eclectic and talented group of associate editors, not to mention a delightful editorial board and department editors who represent the platinum standard when it comes to good content. I've been blessed to have the opportunity to work on ensuring that *CiSE* continues to be a vibrant publication in the years to come, not only in my role as the EIC, but as an active volunteer in the IEEE Computer Society in general, where I also remain involved in exciting initiatives such as *Computing Now* and the Educational Activities Board.

Our publication is in good health overall. The content continues to be strong. And we're bringing emerging computational scientists and engineers to the board, with the recent additions of Matthew Turk (from Columbia University), Manish Parashar (from Rutgers University), and Hojjat Adeli (from the Ohio State University). It's my intention to keep *CiSE* fresh, exciting, and vibrant through strategic appointments, especially in areas that could use more coverage. You'll be seeing—or will have seen—various introductions of these board members, especially in the coming year.

The recent appointments cover areas that are important to *CiSE* in general. Matthew Turk is an astrophysicist with strong interests in the boundaries of computing and astrophysics. Manish Parashar, who co-edited the Cloud Computing special issue with me, is an interdisciplinary computer scientist and former NSF program director who is on the computer engineering side, with a strong interest in cyberinfrastructure and embedding scientific/engineering applications in the clouds (and beyond). Hojjat Adeli is an engineer who works on large-scale numerical simulation and the emerging areas of computational intelligence, bringing new engineering expertise to our board (our title includes the word and our board should reflect it).

These recent appointments also have given me the opportunity to take pause and think about what *CiSE* could become. I think the opportunity and promise is potentially unbounded. We're one of the precious few titles positioned at the intersection of computer science, science, and engineering. This might not seem like a big deal to long-term readers of this title—but it is. At my university, I was recently named a fellow in a new center focused on *interdisciplinary thinking*. Today, many universities are realizing that students want more interdisciplinary programs and interaction in general, but they don't really know how to go about it. There are certainly success stories. There are also plenty of the less-than-successful kind. I don't have all the answers, but I do know that *CiSE* is doing something right, and it provides a quality place for interdisciplinary work at the aforementioned intersection to flourish.

What We Publish

This brings me to the challenge to you, our readers, and to those who want to publish in *CiSE*. A well-known newspaper that requires no introduction bears the slogan, "All the news that is fit to print." To this I say, if only we were so lucky. We're a small title, and it would be nice if we could publish articles on literally every topic. When you think about it, if you took the words computing, science, and engineering and extracted all

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of the known topics on those subjects, you literally could publish on almost all topics in existence outside of the humanities. We obviously can't do that, and I feel a need to clarify what we can publish.

First, I call on our readers to visit the "About" page for CiSE at http://computer.org/cise. You don't have to go there now, because here's what you'll find as of 28 January 2014:

> Physics, medicine, astronomy—these and other hard sciences share a common need for efficient algorithms, system software, and computer architecture to address large computational problems. And yet, useful advances in computational techniques that could benefit many researchers are rarely shared. To meet that need, *Computing in Science & Engineering* (CiSE) presents scientific and computational contributions in a clear and accessible format.

In the next editorial board meeting, I'll be working with my editorial board to enhance/expand this description. Although it accurately reflects at a general level what *CiSE* does, it doesn't give prospective authors a perfectly clear perspective on what we publish versus what might be better-suited for publication elsewhere. More importantly, it's a bit unclear on the best way to present your work for publication in *CiSE*.

I've long believed that many prospective authors who submit general articles to *CiSE* (those not part of a special or theme issue) often misunderstand this description. We get a number of submissions that are otherwise good manuscripts, but are largely unresponsive to the general themes of our publication. As someone whose doctoral training is in computer science with interests in many other disciplines, I think one of the key issues I encounter involves contributions that are purely of interest to computer scientists. If it's only interesting to me, I know there's something wrong with the article. I also see contributions that are purely of interest to mathematicians or other scientific domains. What we're looking for in *CiSE* are the application of computer science and mathematics to understand or solve important scientific and engineering problems. Although a new sorting algorithm, networking protocol, or numerical method might excite me and other editorial board members, these are often not good topics for publication in *CiSE*. There are a myriad of other venues to present more fundamental/theoretical work, and an author won't be well-served by publishing such articles here. So when submitting an article that uses a cool algorithm or data structure, please make sure it's addressing a particular scientific or engineering domain. If it's not, it likely belongs in a publication from one of our sponsoring societies (IEEE, IEEE Computer Society, or AIP) or sister societies (ACM).

Other Considerations

So what else should potential authors consider when publishing here? We're a periodical (magazine) that uses full peer review for all regular and special issue submissions. We differ from many other magazines in that our peer review does follow the standards and rigor of other transactions in our sister societies. (In fact, some of our recent issues

Welcome Aboard!

CiSE welcomes the following new editorial board member.

Hojjat Adeli is a professor of civil, environmental, and geodetic engineering, and by courtesy, a professor of biomedical engineering, biomedical informatics, electrical and computer engineering, and neuroscience at The Ohio State University. His research interests include computational neuroscience; biological and brain signal processing; computer-aided engineering (CAE); smart bridges and structures; and large-scale numerical simulation. Adeli has a PhD in civil/structural engineering from Stanford University. He is a Fellow of IEEE and the American Association for the Advancement of Science (AAAS), and he is the Editor-in-Chief of three journals: *Computer-Aided Civil and Infrastructure Engineering, Integrated Computer-Aided Engineering,* and *International Journal of Neural Systems*. He is a Distinguished Member of ASCE. In 1998, he received the Distinguished Scholar Award, OSU's highest research honor. Contact him at adeli.1@osu.edu.

had acceptance rates of around 18%, which competes with some of the best conferences/journals out there.) But we're not looking for articles written as journal articles. We're looking for journal-quality articles that are presented for an audience that (we hope) reads our publication as if they're reading a magazine. It's a tough balancing act, but one that I think we do exceptionally well.

We have an editorial staff that takes great care to work with authors to ensure that the manuscript is ultimately as comprehensive and comprehensible as possible. If we were a journal, we probably wouldn't focus on the article being comprehensible to a wider audience. So when writing for us, please keep in mind that reworking a (possibly failed) conference or journal submission elsewhere is probably not going to lead to an accepted article in *CiSE*.

Previous EICs of *CiSE* have used the term *breezy* to describe the type of contributions that do best. In the end, an article that has challenging ideas but is readable will have greater success and a larger impact in *CiSE*. And to that point, as the EIC, I'm involved in annual meetings where we look at the articles that do best, especially in digital library download statistics. The articles that do best are the ones where department editors and/or accepted articles have been written with the idea of being understandable by intelligent readers who perhaps have interests but not formal training in a particular domain.

Last, authors often don't realize that editors are interested to see an abstract of your idea before we put the prospective paper through peer review (assuming we don't reject it for being out of scope first). We'd rather hear about your idea and give you confidential, objective feedback. An email to me or other editorial board members is entirely appropriate, and doesn't compromise the review process. It's your idea and your paper. If I were given a choice, I'd like to see all of the papers I receive be of acceptable quality. Of course, this will never happen, but if you ask my opinion, the hope is that I can put your paper in a better position to be accepted. Based on the way the Computer Society (and all good organizations) works, I will not be reviewing your paper. Instead, I find a cognizant member of my editorial board to handle the review, and this member will find at least 2–3 outside reviewers to independently evaluate your paper. We go out of our way to ensure fairness to authors.

I hope this sheds light on *CiSE's* overall process. As your humble EIC, I want to keep the quality of this publication high (which is how I found it) and do whatever I can to make it better and improve our efficiency when it comes to reviewing articles. More importantly, I have at least one EIC's perspective (mine) on what we consider fit to print, to which I can point prospective authors. The end result is a win-win scenario for the EIC, the editorial board, our subscribers, and other digital library readers who are increasingly drawn to *CiSE* content. If you find yourself reading this and wanting to write for *CiSE*, please feel free to send me an abstract. *CiSE*'s department editors (for example, for the Books, Computer Simulations, Education, Novel Architectures, Scientific Programming, Visualization Corner, and Your Homework Assignment departments) are also interested in publishing interesting work that's perhaps not in need of full peer review. Please don't hesitate to contact us. And thank you for reading!